Appl. No. 10/816,697

Reply to Office action dated October 1, 2007

Attorney Docket 126533-1

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the

application:

**Listing of Claims:** 

1-18. (Canceled)

19. (Currently amended) A fuel cell stack comprising:

a first fuel cell assembly and a second fuel cell assembly electrically

coupled together-such that at least one sealed passage extends between said first and

said second fuel cell assemblies, each said-first and second fuel cell assembly each

comprising:

at least one hollow manifold comprising a top wall and a bottom wall.

said top and bottom walls extending between a first end and a second end, said top and

bottom walls each of the top and bottom walls including-comprising a sealed fuel

passage for allowing fuel to enter and exit the at least one hollow manifoldat least one

opening extending there through in flow communication with said hollow manifold:

and

a fuel cell comprising an anode, a cathode and an electrolyte disposed

there between, said fuel cell disposed on one of said top and bottom walls between said

at least one manifold;

wherein a portion of each of said top wall and said bottom wallone of the top

and bottom walls of said at least one hollow manifold extending between said fuel cell and said sealed fuel passage, immediately adjacent to both said fuel cell and said sealed

passage, are configured to have includes a compliant structure to accommodate strain

therebetween.lower stiffness compared to at least one of said fuel cell and said sealed

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passage to accommodate a strain between said fuel cell, said top wall and said bottom wall, and said sealed passage.

20. (Original) The fuel cell stack accordingly to claim 19 further comprising a cathode flow channel coupled to said at least one hollow manifold of said first fuel cell assembly and said second fuel cell assembly, said cathode flow channel configured for directing an oxidant between said first fuel cell assembly and said second fuel cell

assembly.

21. (Original) The fuel cell stack in accordance with claim 19, wherein said at least one hollow manifold for said first fuel cell assembly and said second fuel cell

assembly is substantially rectangular.

22. (Original) The fuel cell stack in accordance with claim 19, wherein said at

least one hollow manifold of said first fuel cell assembly and said second fuel cell

assembly further comprises an electrically conductive material.

23. (Original) The fuel cell stack according to claim 19, wherein said fuel cell is

selected from the group consisting of solid oxide fuel cell, proton exchange membrane fuel cell, molten carbonate fuel cell, phosphoric acid fuel cell, alkaline fuel cell, direct

methanol fuel cell, regenerative fuel cell, zinc air fuel cell, and protonic ceramic fuel

24. (Original) The fuel cell stack according to claim 19, wherein said fuel cell

comprises a solid oxide fuel cell.

25. (Original) The fuel stack according to claim 19, wherein said strain is

developed due to thermal expansion.

26. (Previously Presented) The fuel cell stack according to claim 19, wherein

thermal coefficients of expansion of said fuel cell and said top and bottom walls are

different.

cell.

27-29. (Canceled)

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- 30. (Original) The fuel cell stack according to claim 19, wherein said fuel cell stack comprises materials of different thermal coefficients of expansion.
- 31. (Previously Presented) The fuel cell stack according to claim 19, wherein said fuel cell comprises a ceramic material and each of said top wall and said bottom wall comprises a metal.
- 32. (Previously Presented) The fuel cell stack according to claim 19, wherein each of said top wall and said bottom wall are interconnects.
- 33. (Previously Presented) The fuel cell stack according to claim 19, wherein each of said top wall and said bottom wall of the hollow manifold acts as an anode interconnect.
- 34. (Currently Amended) The fuel cell stack according to claim 19, wherein some the compliant structure is located portions of each of said top wall and said bottom wall immediately adjacent to said fuel cell and said sealed passages-passage, are configured to have compliant structures to accommodate a difference in strain between said fuel cell, said top wall and said bottom wall, and said sealed passages.
- 35. (Currently Amended) The fuel cell stack according to claim 19, wherein some-portions-of-each-of-said-top-wall-and-said-bottom-wall-immediately-adjacent-to-said-fuel-cell and-said-sealed-passages are configured to have corrugated structures to accommodate a difference in strain-between said-fuel-cell, said-top-wall and-said-bottom-wall, and-said-sealed-passagesthe compliant structure comprises a corrugated structure.

36-37, (Canceled)